Appln. No. 09/864,107
Amdt. dated April 29, 2004
Reply to Office Action dated April 6, 2004

IN THE CLAIMS:

Please amend claims 1, 10, 20 and 22 as set forth in the listing of claims. The following listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1. (Currently Amended). A method for providing and processing a cursored user interaction with a spatially displayed medical image and producing graphics related data on said medical image, wherein said method comprises the steps of:

providing a menu-less graphical interface for displaying, essentially unobstructed, said medical image in a substantial portion of said ~~menu-less~~ graphical interface;

controlling a mouse computer interface device having at least one button;

displaying a pointer symbol on said graphical interface, wherein said pointer symbol represents a current position of said mouse on said graphical interface;

tracking a status of each of said at least one button;

detecting a position of said mouse, wherein said position detection step is activated upon actuation of one of said at least one button;

generating a measurement graphic related to a predefined set of measurement operations on said medical image upon at least one actuation of said at least one button; and

enabling the generation of the measurement graphics without activation of user interface constructs.

Claim 2 (Original). A method as claimed in Claim 1, wherein a single-point actuating/positioning assigns an actual pixel position and/or a pixel intensity quantity to the point in question.

Claim 3 (Original). A method as claimed in Claim 1, wherein a point pair actuating/positioning assigns a distance value to the pair in question.

Claim 4 (Original). A method as claimed in Claim 1, wherein a triple-point actuating/positioning assigns an angle value quantity to a middle point of the triple.

Claim 5 (Original). A method as claimed in Claim 1, wherein multiple-point actuating/positioning for an open or closed point sequence assigns an area value quantity to a concave region delimited by the sequence in question.

Claim 6 (Original). A method as claimed in Claim 1, wherein a freehand-drawn actuating/positioning for an open or closed curve assigns an area value quantity to a concave region delimited by said curve.

Claim 7 (Original). A method as claimed in Claim 1, wherein multiple-point actuating/positioning for an open or closed sequence assigns a poly-line measurement quantity to the sequence so drawn.

Claim 8 (Original). A method as claimed in Claim 1, wherein a freehand-drawn actuating/positioning for an open or closed sequence assigns a measurement quantity to the freehand sequence so drawn.

Claim 9 (Original). A method as claimed in any of Claims 2. to 8, and furthermore assigning a pixel staticizing to an assigned geometrical entity.

Claim 10 (Currently Amended). An apparatus arranged to provide and process a cursored user interaction with a spatially displayed medical image, wherein said apparatus comprises:

a menu-less graphical interface for displaying, essentially unobstructed, said medical image in a substantial portion of said ~~menu-less~~ graphical interface;

a pointing device having at least one button, wherein said pointing device is represented on said graphical interface by a standardized pointer symbol and wherein said pointer symbol represents a current position of said pointing device within the context of said graphical interface;

a processor configured to detect an actuation of each of said at least one button of said pointing device and track positions of said pointing device; and

a processor-internal list of measurement operations, said measurement operations being performed upon at least one actuation of the at least one button and producing corresponding measurement graphics on said medical image,

said processor being arranged to produce the measurement graphics based on said list of measurement operations without activation of user interface constructs.

Claim 11 (Previously Presented). An apparatus as claimed in Claim 10, further comprising assigning means for upon a single-point actuating/positioning assigning an actual pixel position and/or a pixel intensity quantity to the point in question.

Claim 12 (Previously Presented). An apparatus as claimed in Claim 10, further comprising assigning means for upon a point pair actuating/positioning assigning a distance value to the pair in question.

Claim 13 (Previously Presented). An apparatus as claimed in Claim 10, further comprising assigning means for upon a triple-point actuating/positioning assigning an angle value quantity to a middle point of the triple.

Claim 14 (Previously Presented). An apparatus as claimed in Claim 10, further comprising assigning means for upon a multiple-

point actuating/positioning for an open or closed point sequence assigning an area value quantity to a concave region delimited by the sequence in question.

Claim 15 (Previously Presented). An apparatus as claimed in Claim 10, further comprising assigning means for upon a freehand-drawn actuating/positioning for an open or closed curve assigning an area value quantity to a concave region delimited by said curve.

Claim 16 (Previously Presented). An apparatus as claimed in Claim 10, further comprising assigning means for upon a multiple-point actuating/positioning for an open or closed sequence assigning a poly-line measurement quantity to the sequence so drawn.

Claim 17 (Previously Presented). An apparatus as claimed in Claim 10, further comprising assigning means for upon a freehand-drawn actuating/positioning for an open or closed sequence assigning a measurement quantity to the freehand sequence so drawn.

Claim 18 (Previously Presented). An apparatus as claimed in any of Claims 11 to 17, further comprising staticizing means for assigning a pixel staticizing to an assigned geometrical entity.

Claim 19 (Previously Presented). A machine readable computer program, said program implementing a menu-less graphical interface and arranged for processing cursored user interaction with a spatially displayed medical image for producing graphics related data on such image, for implementing a method as claimed in Claim 1, said program being arranged for sensing mouse positionings and/or actuations and for effecting inherent measuring functionalities based on relative such positionings with respect to an associated imaged medical object, and for subsequently outputting representations of said measuring functionalities for displaying in association with said medical object.

Claim 20 (Currently Amended). A method as claimed in claim 1, further comprising the step of enabling the generation of the measurement graphic based solely on actuation of said at least one button of said mouse when said pointer symbol is situated on said medical image.

Claim 21 (Previously Presented). A method as claimed in claim 1, further comprising the step of enabling the generation of the measurement graphic without requiring a user to define a type of graphic being generated.

Claim 22 (Currently Amended). A method as claimed in claim 1, wherein the measurement graphic is generated without movement of said pointer symbol associated with said mouse outside of said medical image.